

WHAT IS CLAIMED IS:

1. A data-recordable optical disk apparatus, comprising:

setting means which records test data in a test area on an
5 optical disk and sets recording power in accordance with the quality
of a reproduced signal obtained by reproducing said test data;

means for recording management data in a recording management
area on said optical disk through use of said recording power;

means for verifying said recorded management data;

10 detection means for detecting the number of errors in said
management data when a result of verification is positive;

comparison means for comparing the number of said errors with
an allowable value; and

correction means for correcting said recording power when
15 the number of said errors exceeds said allowable value.

2. The apparatus according to claim 1, wherein

said correction means corrects said recording power by means
of causing said setting means to repeatedly perform setting operation
20 while changing a setting method of said setting means.

3. The apparatus according to claim 1, wherein

said correction means corrects said recording powering by
increasing or decreasing said recording power by a predetermined
25 amount or proportion.

4. The apparatus according to claim 2, wherein

said setting means sets said recording power in accordance
with the quality of said reproduced signal obtained when said test

data are recorded at a plurality of laser power levels which have been changed within a predetermined range; and

said correction means causes said setting means to repeatedly perform setting operation while reducing said predetermined range.

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5. The apparatus according to claim 2, wherein

said setting means sets, to said recording power, laser power at which the quality of said reproduced signal achieved when said test data are recorded at a plurality of said laser power levels is closest to a target value; and

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said correction means causes said setting means to repeatedly perform setting operation while changing said target value.

6. The apparatus according to claim 2, wherein

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said setting means sets, to said recording power, laser power at which the quality of said reproduced signal achieved when said test data are recorded at a plurality of said laser power levels is closest to a target value; and

said correction means causes said setting means to repeatedly perform setting operation while being restricted to a predetermined power range in the vicinity of said recording power.

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7. The apparatus according to claim 2, wherein

said setting means sets said recording power in accordance with the quality of said reproduced signal obtained when said test data are recorded with a predetermined recording strategy; and

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said correction means causes said setting means to repeatedly perform setting operation while changing said recording strategy.

8. The apparatus according to claim 1, wherein
said error detection means detects the number of PI errors
in said management data.

5 9. The apparatus according to claim 8, further comprising:
means for detecting the number of PI errors in emboss data
by means of reproducing said emboss data existing in a predetermined
area on said optical disk; and
means for setting said allowable value on the basis of the
10 number of said PI errors in said emboss data.

10. The apparatus according to claim 1, wherein
said optical disk is a DVD-R disk or a DVD-RW disk;
said recording management area is an RMA; and
15 said management data are RMD.

11. The apparatus according to claim 10, wherein
said error detection means detects the number of said PI errors
in one ECC block of said RMD.

20 12. An optical disk, comprising:
means which reproduces emboss data on said optical disk and
counts the number of errors in said emboss data;

means for setting an allowable value on the basis of the number
25 of errors in said emboss data;

means which records test data on said optical disk while
changing laser power and sets recording power on the basis of the
quality of a signal reproduced from said test data;

means for recording management data on said optical disk at

said recording power;

means for reproducing said management data and counting the number of errors in said management data; and

means which again records said test data while changing said
5 laser power in the vicinity of said recording power and which again sets said recording power on the basis of the quality of said signal reproduced from said test data when the number of errors in said management data exceeds said allowable value and which records data on said optical disk at said recording power when the number of
10 errors in said management data becomes equal to or less than said allowable value.

13. An optical disk, comprising:

means for reproducing emboss data on said optical disk and
15 counting the number of errors in said emboss data;

means for setting a first allowable value TH1 and a second allowable value TH2 ($TH1 > TH2$) in accordance with the number of errors in said emboss data;

means for recording test data on said optical disk while
20 changing laser power, and setting recording power on the basis of the quality of a signal reproduced from said test data;

means for recording management data on said optical disk at said recording power;

means for reproducing said management data and counting the
25 number of errors in said management data; and

means which, when the number of errors in said management data exceeds said first allowable value TH1, again records said test data while changing said laser power according to a method differing from that employed when the number of errors in said

management data is equal to or less than said first allowable value TH1 and exceeds said second allowable value TH2; which again sets said recording power on the basis of the quality of said signal reproduced from said test data; and which records data on said optical
5 disk at said recording power when the number of errors in said management data is equal to or less than said second allowable value TH2.

14. An optical disk, comprising:

- 10 means for storing an allowable value beforehand;
- means for recording test data on said optical disk while changing laser power, and setting recording power on the basis of the quality of a signal reproduced from said test data;
- means for recording management data on said optical disk at
15 said recording power;
- means for reproducing said management data and counting the number of errors in said management data; and
- means which again records said test data while changing said laser power in the vicinity of said recording power and again sets
20 said recording power on the basis of the quality of said signal reproduced from said test data when the number of errors in said management data exceeds said allowable value and which records data on said optical disk at said recording power when the number of errors in said management data becomes equal to or less than said
25 allowable value.

15. An optical disk, comprising:

- means for storing a first allowable value TH1 and a second allowable value TH2 ($TH1 > TH2$) beforehand;

means which records test data on said optical disk while changing laser power and sets recording power on the basis of the quality of a signal reproduced from said test data;

means for recording management data on said optical disk at
5 said recording power;

means for reproducing said management data and counting the number of errors in said management data; and

means which, when the number of errors in said management data exceeds said first allowable value TH1, again records said
10 test data while changing said laser power according to a method differing from that employed when the number of errors in said management data is equal to or less than said first allowable value TH1 and exceeds said second allowable value TH2; which again sets said recording power on the basis of the quality of said signal
15 reproduced from said test data; and which records data on said optical disk at said recording power when the number of errors in said management data is equal to or less than said second allowable value TH2.